

We Claim:

1. An ergonomic hand held flat panel display device, the device comprising:
 - a housing,
 - a touch responsive flat panel display screen disposed on one major face of said housing,
 - a primary handgrip and a secondary handgrip on said display housing wherein said primary hand grip and said secondary handgrip are disposed on opposing sides of said housing, both of said handgrips wrapping around said housing from the front to the back of said housing, both of said handgrips further angled inward towards the back of the display device,
 - a printed circuit board inside said housing in electrical contact with and enabling said flat panel display to display computer output,
 - a connector for receiving power and output signal from a computer said output signal to be displayed on said flat panel display.
2. The display device of claim 1 comprising at least two tactile ridges disposed on each of said handgrips.
3. The display device of claim 1 wherein said primary grip is physically larger in surface area than said secondary grip.
4. The display device of claim 1 wherein said primary handgrip and said secondary handgrip are contoured to fit a user's hand and have only rounded edges to maximize comfort against a user's hand.
5. The display device of claim 1 wherein mass inside said housing is distributed towards the primary handgrip.

PCT/US2014/035007

6. The display device of claim 1 wherein said primary and secondary handgrips are composed of rubber or other suitable shock absorbing friction enhancing material.
7. The display device of claim 1 wherein both of said handgrips are curved inward toward the back of said display device an angle greater than 0 degrees but less than 45 degrees.
8. A hand held, flat panel display device comprising:
a display housing, said display housing containing a touch screen display with an underlying flat panel display disposed on a major front face of said housing,
said housing further containing a printed circuit board in electrical contact with and for outputting video signals to said flat panel display and for performing computer operations, including at least a microprocessor, volatile and non-volatile storage, and video graphics hardware to provide signal and control to said flat panel display,
a primary handgrip and a secondary handgrip on said display housing wherein said primary hand grip and said secondary handgrip are disposed on opposing ends of said housing, both of said handgrips wrapping around said housing from the front to the back of said housing, both of said handgrips further angled inward towards the back of the display device, and further wherein said primary hand grip surrounds a removable battery, which can be selectively engaged or disengaged from said housing.
9. The hand held display device of claim 8 wherein said primary grip is physically larger in surface area than said secondary grip.

P
A
T
E
N
T
E
D
U
S
A

10. The hand held display device of claim 8 wherein said primary handgrip and said secondary handgrip are contoured to fit a user's hand and have only rounded edges to maximize comfort against a user's hand.
11. The display device of claim 8, wherein said device is operable for right handed or left handed use such that a user may always hold the device using at least the primary hand grip.
12. The display device of claim 8 wherein said primary and secondary handgrips are composed of other suitable shock absorbing friction enhancing material.
13. The display device of claim 1 wherein both of said handgrips are curved inward toward the back of said display device an angle greater than 0 degrees but less than 45 degrees.
14. An ergonomic hand held flat panel display device, the device comprising:
 - a housing,
 - a touch screen disposed on one major face of said housing,
 - a flat panel display behind said touch screen and responsive to said touch screen,
 - a primary handgrip and a secondary handgrip on said display housing wherein said primary hand grip and said secondary handgrip are disposed on opposing sides of said housing, both of said handgrips wrapping around said housing from the front to the back of said housing, said handgrips further angled inward towards the back of the display device,
 - a printed circuit board inside said housing enabling electrically connected to and said flat panel display and enabling said flat panel display to display computer output and selectively to perform independent computer functions,

said circuit board comprising at least a microprocessor, volatile and non-volatile storage, and video graphics hardware for sending output to and controlling said flat panel display,

a connector for receiving power and output signal from a computer said output signal to be displayed on said flat panel display.

15. The display device of claim 14, wherein said display device is operable in a first passive mode of operation and a second active mode of operation, wherein during said first mode of operation the display device performs as a display for another computer and in a second mode of operation the display device performs as an independent computer utilizing its own computer hardware for processing power.
16. The display device of claim 14 wherein said primary grip is physically larger in surface area than said secondary grip.
17. The display device of claim 14 comprising at least two tactile ridges disposed on each of said handgrips.
18. The display device of claim 14 wherein said primary handgrip and said secondary handgrip are contoured to fit a user's hand and have only rounded edges to maximize comfort against a user's hand.
19. The display device of claim 14 wherein said primary handgrip surrounds a battery which powers said display device, wherein said battery may be selectively engaged or disengaged by a user.
20. The display device of claim 14 wherein said primary and secondary handgrips are composed of rubber or other suitable shock absorbing friction enhancing material.

21. The display device of claim 14 wherein both of said handgrips are curved inward toward the back of said display device an angle greater than 0 degrees but less than 45 degrees.

22. An ergonomic hand held flat panel display device, the device comprising:

- a housing,
- a touch screen disposed on one major face of said housing,
- a flat panel display behind said touch screen and responsive to said touch screen,
- a primary handgrip and a secondary handgrip on said display housing wherein said primary hand grip and said secondary handgrip are disposed on opposing ends of said housing, both of said handgrips wrapping around said housing from the front to the back of said housing, said handgrips further angled inward towards the back of the display device,
- a printed circuit board inside said housing in electrical contact with and enabling said flat panel display to display computer output.

23. The device of claim 22 wherein said handgrips are angled towards the back of the display device at an angle greater than 0 degrees but less than 45 degrees.

24. The device of claim 22 wherein at least two tactile ridges are disposed on each of said handgrips.

25. The device of claim 22 further comprising a wireless receiver inside said housing and in electrical communication with said circuit board for communicating and selectively receiving information from another computer wirelessly.

26. A hand held flat panel computer display unit comprising in combination:

a display housing comprising at a front and back side;

a touch screen disposed on one major face of said housing;

a primary and a secondary handgrip on opposing terminal sides of said housing, both of said handgrips wrapping in a rounded configuration around said terminal sides of said housing, each of said hand grips being electrical insulating and substantially non-skid,

a printed circuit board inside said housing adapted to be in contact with said touch screen to enable said flat panel display to display computer output.

27. The flat panel display of claim 26 wherein a mass of said unit is distributed nearer to said primary hand grip than it is to said secondary handgrip.

28. The flat panel display of claim 26 wherein said handgrips are angled inward toward the back side of said housing at an angle greater than 0 and less than 45 degrees.

29. The flat panel display of claim 26 wherein said primary handgrip is physically larger in surface area than said secondary grip.

30. The flat panel display of claim 26 wherein both of said handgrips are composed of rubber or other suitable shock absorbing friction enhancing material.

31. The flat panel display of claim 26 wherein at least one of said terminal sides has an electrical cable connected thereto.

32. The flat panel display of claim 26 having at one of said terminal sides a removable power supply which is also part of a handgrip.

33. The flat panel display of claim 26 having a connector adapted to be connected to a computer.

34. An ergonomic flat panel computer display device, the device comprising:
a housing,
a touch responsive flat panel display screen disposed on one major face of said housing,
a pair of hand grips on opposing ends of said housing, said hand grips wrapping around from the display screen face of said housing to the opposing face of said housing and said hand grips further angled inward toward said opposing face.

35. The display device of claim 34 wherein said display device is adapted as an external display for a computer.

36. The display device of claim 34 wherein said display device is adapted to function as an independent computer.

37. The display device of claim 34 wherein internal components in of said device is distributed nearer to one of said hand grips than the other handgrip.

38. The display device of claim 34 wherein said handgrips are angled inward toward the back side of said housing at an angle greater than 0 and less than 45 degrees.

39. The display device of claim 34 wherein said handgrips are composed of a shock absorbing, non-skid, electrically insulating material.

40. The flat panel display of claim 34 having at one side a removable power supply which is also part of a handgrip.